

REMARKS

Claims 1-5, 7-9, 11 and 15-16 were rejected under 35 U.S.C. 102(b) or 103(a) as being anticipated by US Pat. 6,142,941 (Benhalima et al.) Claim 1 and its dependent claims have been amended to clarify the present invention.

Amended Claim 1 describes a system providing cardiac stimulation in combination with an endoscopic imaging probe, comprising a disposable, removable sheath sized to attach to an endoscopic imaging probe; a cardiac stimulation electrical conductor integrated in the sheath; and an electrical cable, attached to the cardiac stimulation electrical conductor and extending from the sheath, and adapted to be connected to an external defibrillator. The present invention enables an imaging probe such as an ultrasonic TEE probe to be fitted with a sheath for a cardioversion procedure in which the TEE probe looks for emboli before and after cardioversion. After the procedure is finished the sheath is removed and the TEE probe can be used for its usual diagnostic imaging and monitoring procedures. The sheath can be sterilized for another procedure but, since it is disposable, it is preferable to dispose of the sheath and use a new sheath for the next procedure. Since the sheath is simple with minimally a conductor for cardiac stimulation and a cable for connection to a defibrillator, it is inexpensive and can be used for a single procedure.

Benhalima et al. describes an ultrasonic multiplane TEE probe which is manufactured with electrotherapy electrodes 8 along the tube 1 of the endoscope of the probe. A button 10 is provided on the control handle of the endoscope for triggering the electrotherapy shock. Unlike an embodiment of the present invention, the Benhalima et al. device is permanently designed with both ultrasonic imaging and electrotherapy features. As is well known, TEE probes are used far more for diagnostic imaging alone than for image-

assisted electrotherapy. Thus, the electrotherapy features of the probe are an added expense for what is predominantly an imaging probe typically costing, without the electrotherapy features, upwards of \$40,000. Moreover, each time the TEE probe is used it must be sterilized and the little-used electrotherapy electrodes are repeatedly subject to the heat and chemicals of the sterilization which can degrade them. Thus, when they are needed, they can be degraded from repeated sterilization procedures.

The present invention overcomes these problems by providing an electrotherapy sheath which can be fitted to an endoscope only when the electrotherapy procedure is needed. Since the sheath is disposable, it does not need to be sterilized after use, and the cost of the endoscope is not burdened with the little-used electrotherapy elements. The Examiner tries a tortuous reading of Benhalima et al. which defines the insulation of the wire 14 to the external electrode as a sheath but clearly this is ineffective with the clarified claim language. For all of these reasons it is respectfully submitted that amended Claim 1 and its dependent Claims 2-6, 9-14 and 16 are patentable over Benhalima et al. The other cited patents, 4,640,298 (Pless et al.) which describes an inflatable pacing electrode with no imaging capability, and 5,588,432 (Crowley) which describes an electrotherapy catheter, also fail to show or suggest a removable electrotherapy sheath for an endoscopic probe and hence do not provide the elements missing from Benhalima et al. vis-à-vis the amended claims.

Several typographical errors in the specification have been corrected.

In view of the foregoing amendment and remarks it is respectfully submitted that amended Claim 1 and its dependent Claims 2-6, 9-14 and 16 are patentable over and combination of Benhalima et al., Pless et al., and Crowley. Accordingly it

is respectfully requested that the rejection of these claims under 35 U.S.C. §102(b) and §103(a) be withdrawn.

In light of the foregoing amendment and remarks, it is respectfully submitted that this application is now in condition for allowance. Favorable reconsideration is respectfully requested.

Respectfully submitted,

JOSEPH ROCK ET AL.

By: / W. Brinton Yorks, Jr.
W. Brinton Yorks, Jr.
Reg. No. 28,923

Philips Electronics
22100 Bothell Everett Highway
P.O. Box 3003
Bothell, WA 98041-3003
(425) 487-7152
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